USPS Pricing Engine SDK

January 18, 2017.

Summary

This is the Domestic and International Pricing Engine SDK (version 11.5.0.0) for Sprint 8 of the January 22, 2017 Release. The following is a list of enhancements included in this release.

BNS 483 – COD Redesign

- "Collect on Delivery" is renamed to "Collect on Delivery Hold For Pickup"
- "Collect on Delivery Restricted Delivery" is renamed to "Collect on Delivery Hold For Pickup Restricted Delivery"
- "Registered Mail™ COD Collection Charge" is renamed to "Registered Mail™ COD HFPU Collection Charge"

This BNS has been canaled for the January 2017 Price Change.

BNS 530 - International Dynamic Prefix Bar Code Assignment

The International Pricing Engine will return the ECOMPRO postage services for the countries listed below in the "ECOMPRO Countries" table. The Priority Mail International postage service will not be returned for these countries. The IDs and Names for ECOMPRO postage services will match the Priority Mail International postage services (see the "ECOMPRO Postage Service" table). All international customer maps that return will now also return ECOMPRO. A Mail Type Code of "C" has been added to the Group Code to identify the mail service as ECOMPRO. The attribute "ECOMPRO" has also been added to farther identify the Postage Service as "ECOMPRO". The "ECOMPRO" attribute will be set to "True" for is ECOMPRO or "False" for is not ECOMPRO. The Country class member TypeOf has been updated to be a 16 digit off/on bit map where index 0 will indicate that the country does or does not support ECOMPRO.

Code Segment to Access the ECOMPRO Setting

```
int ecompro_index = 0;
bool has_ecompro = (((1 << (ecompro_index)) & Country.TypeOf) > 0);
```

ECOMPRO Countries

Barbados	BB
Belarus	BY
Bhutan	BT
Canada*	CA
Cape Verde	CV
Djibouti	DJ
Georgia	GE
Ghana	GH

Jordan	JO
Lithuania	LT
Maldives	MV
Moldova	MD
Poland	PL
South Africa	ZA
Switzerland	CH
Viet Nam	VN

*For COMMERCIAL only

ECOMPRO Postage Service

Group Code	ID	Name
ICXX0XX	9	Priority Mail International®
ICFB0XX	11	Priority Mail International® Large Flat Rate Box
ICFB1XX	12	Priority Mail International® Medium Flat Rate Box
ICFB2XX	13	Priority Mail International® Small Flat Rate Box
ICFB3XX	20	Priority Mail International® DVD Flat Rate priced box
ICFB4XX	21	Priority Mail International® Large Video Flat Rate priced box
ICFE0XX	10	Priority Mail International® Flat Rate Envelope
ICFE1XX	18	Priority Mail International® Legal Flat Rate Envelope
ICFE2XX	19	Priority Mail International® Padded Flat Rate Envelope
ICFE3XX	15	Priority Mail International® Gift Card Flat Rate Envelope
ICFE4XX	17	Priority Mail International® Small Flat Rate Envelope
ICFE5XX	16	Priority Mail International® Window Flat Rate Envelope

BNS 548 - Premium Forwarding Service Commercial Flat Rate Containers – Half Tray and Full Tray

The calculator will support the Half Tray and Full Tray prices for Premium Forwarding Service as an addition to the Mailing Fees functionality.

Keys:

- PremiumForwardingService.Commercial.PriorityMailExpress.HalfTray
- PremiumForwardingService.Commercial.PriorityMailExpress.FullTray
- PremiumForwardingService.Commercial.PriorityMail.HalfTray
- PremiumForwardingService.Commercial.PriorityMail.FullTray

BNS 600 - Standard Mail

The “Standard Mail” mail service is renamed to “USPS Marketing Mail”.

BNS 392 - Standard Mail Presort Letters - Reduce Simple Sample Tiers

The Pricing Engine has been updated with the following changes:

Standard Mail (USPS Marketing Mail) Letters and Standard Mail (USPS Marketing Mail) Nonprofit Letters

Automation and Carrier Route Letters
Eliminated “3-Digit” Price Category and Piece / Pound pricing

Nonmachinable and Carrier Route Nonautomation Letters
Updated to have 2 pricing tiers; "up to 4 ounces" and "more than 4 ounces."

Standard Mail (USPS Marketing Mail) Letters and Standard Mail (USPS Marketing Mail) Nonprofit Parcels

Standard Mail Carrier Route Parcels - Simple Samples
Reduced pricing tiers from 6 to 2; 1-200,000 pieces and over 200,000 pieces.

BNS 411 - First Class Mail Presort

First-Class Mail Automation Postcards and Letters
Eliminated the “3-Digit” price category.

BNS 560 - Create 3rd ounce free for FCM commercial letters only and evaluate residual mail impacts
First-Class Mail Letters up to 3.5 ounces will have the same price.

Updated for Sprint 4
"Residual Nonpresorted" and "Nonpresorted/Single-Piece" have been deleted from First-Class Mail Letters.

BNS 561 - Adjust Standard Mail FSS pricing to minimize customer impact and also maximize contribution
All FSS pricing have been removed from Standard Mail (USPS Marketing Mail) Flats.

BNS 562 - Provide a Simple Price Structure for Standard Mail
The price break for Standard Mail (USPS Marketing Mail) Flats and Standard Mail (USPS Marketing Mail) Nonprofit Flats has been changed from 3.3 to 4 ounces.

BNS 593 - Modify FSS for Bound Printed Matter
All FSS pricing have been removed from Bound Printed Matter Flats

BNS 580 - Alternate Postage Name Change to Share Mail and elimination of two pricing tiers
Added Share Mail to and removed Alternate Postage from Mailing Fees interface.

Keys:
- ShareMail.FCM.Postcards

- ShareMail.FCM.Letters

Add Shipping Date to the Mailing Fees Request

An optional field has been added to the Mailing Fees Request for the Shipping Date. The default value for the field is Today with the Time the request was submitted.

BNS 595 - Regulatory Rate Change (Competive and Market Dominate)

Prices have been updated in existing price cells for all classes of mail for both Market Dominant and Competitive including extra services and fees.

BNS 595 - Update Price Cells per Price File dated

- USPS Marketing Mail NONPROFIT Letters
  - Carrier Route
    - Basic
      - DNDC – 0.179
      - DSCF – 0.171

Updated version number and sign all DLLs

All the libraries have been update to version 11.5.0.0 and re-signed.

Updated databases

New databases have been created for this release: USPS_DOM_2017_01 and USPS_INTL_2017_01 for domestic and international respectively.

Update ServiceDeliveryExtensions.KPGProvider to use TextWithLinksBusiness

This is a result of an internal effort to merge the retail engine and business engines into a single engine.

Update the AnnotationManager in both Domestic and International Engines to update TextWithLinksBusiness

This is a result of an internal effort to merge the retail engine and business engines into a single engine.

Update the Customs Forms Library to use the Business SQL Tables

This is a result of an internal effort to merge the retail engine and business engines into a single engine.

Updated Pricing Engine to use prepared SQL statements

This is one of a number of performance improvements derived from the performance study performed in August 2016.

Cache Dimensions Table

This is one of a number of performance improvements derived from the performance study performed in August 2016.

SQL improvements (indexes and primary keys)

This is one of a number of performance improvements derived from the performance study performed in August 2016.

Update Pricing Engine to pull FCM Letters Nonmachinable Surcharge from Database

The Domestic and International Pricing Engines where updated to pull the following fees from the database, then where hardcoded.

- Nonmachinable Surcharge
- Sunday / Holiday Delivery Fee
- 10:30 AM Delivery Fee

Add Max Country Values validation to the International Pricing Engine

Made updates to the Pricing Engine to validate the Maximum Value of the item based on country. A new attribute "ValueMax" is returned for each Mail Service.

Move Piece / Pound Weight Break to Database

The Domestic and International Pricing Engines where updated to pull the Piece / Pound Weight Break from the database.

BNS 595.5 - EDDMR_RCALC_CR v1 - Customer Map

Added Customer Map for EDDM-R, customer key is 028R6. The customer map support all pricing for the EDDM mail services including EDDM Retail and EDDM Carrier Route.

BNS 595.5 - EDDMR_RCALC_CR v1 - Add Effective Date

Updated the response to include the "Effective Date" for the following Domestic and International methods:

- GetServciesWithPricing
- CalculateServicePrice
- ExtraServicesWithPricing
- MailingFee

The Effective Date can used to determine when the pricing, business logic and structure became or will become valid.

BNS 595.5 - EDDMR_RCALC_CR v1 - Allow EDDM-R to get pricing 30 days out

Allow the users of the customer map 028R6 to request pricing for a shipping date 30 days in the future.

Updated Holidays

The Holiday data has been updated to reflect the 2017 Holidays.

Date	Holiday

Monday, January 2	New Year's Day
Monday, January 16	Birthday of Martin Luther King, Jr.
Monday, February 20	Washington's Birthday
Monday, May 29	Memorial Day
Tuesday, July 4	Independence Day
Monday, September 4	Labor Day
Monday, October 9	Columbus Day
Friday, November 10	Veterans Day
Thursday, November 23	Thanksgiving Day
Monday, December 25	Christmas Day

Move APO/FPO/DPO Validation Table into Database

The Domestic Pricing Engines where updated to pull the APO/FPO/DPO Validation table from the database.

Impact on Existing Applications

You will have to rebuild your applications.

Instructions

1. Copy the DLLs
2. Restore the databases (SQL Server 2012 backups). The database backups are not included and can be downloaded separately. Note: the SQL script files have been included in the package for those that cannot restore the SQL Server 2012 backups. SQL Scripts should be executed in the order shown below.

Note: The batch can be executed with a parameter that specifies the database name. The default database names are "USPS_DOM_2017_01" and "USPS_INTL_2017_01"

i.e.: > "Execute Domestic Price Change Updates.bat" "[your database name]"

Contents

Description	File
Folder	Database
Folder	Domestic
Folder	CR7548
Batch File	CR7548_Database Performance Improvements.bat
SQL Scripts and FMT	…
Folder	CustomerMaps
SQL Script	CreateClient_EDDMR_028R6.sql
SQL Script	CR 7085.sql
SQL Script	BNS 483.sql

SQL Script	BNS 600.sql
SQL Script	BNS 548.sql
SQL Script	BNS 561.sql
SQL Script	BNS 593.sql
SQL Script	BNS 580.sql
SQL Script	BNS 392.sql
SQL Script	BNS 411.sql
SQL Script	BNS 560.sql
SQL Script	BNS 595 Domestic - Competitive.sql
SQL Script	BNS 595 Domestic - Market Dominant.sql
SQL Script	BNS 595 Mailing Fees.sql
SQL Script	CR 7795.sql
SQL Script	BNS 595 CR 595-5.sql
SQL Script	CR 7965.sql
SQL Script	CR 7988.sql
Batch File	Execute Domestic Price Change Updates.bat
Folder	International
Folder	CR7548
Batch File	CR7548_Database Performance Improvements.bat
SQL Scripts	…
Folder	CustomerMaps
Batch File	Execute International Customer Maps Updates.bat
SQL Scripts	…
SQL Script	CR 7085.sql
SQL Script	CR 7795.sql
SQL Script	BNS 530-1.sql
SQL Script	BNS 530-2.sql
SQL Script	BNS 530-3.sql
SQL Script	BNS 595 International - Market Dominant.sql
SQL Script	BNS 530 ECOMPRO Create Tables.sql
SQL Script	BNS 595 International - Competitive.sql
SQL Script	BNS 595 Mailing Fees.sql
SQL Script	CR 6766.sql
Batch File	Execute International Price Change Updates.bat
Folder	Libraries
Rate Engine Framework	RateEngine_Framework.dll
Business Framework	RateEngine_Business.dll
Domestic Business Rate Engine	RateEngine_DomBusiness.dll
International Business Rate Engine	RateEngine_IntlBusiness.dll
Service Delivery Extensions	ServiceDeliveryExtensions.dll
Customs Forms Engine	CustomsFormsEngine.dll
Design Model	Pricing Engine Design Model.pdf
Release Notes	USPS Pricing Engine SDK 11_5_0_0.pdf

Reported Defects and Change Request

ID	Title	Status

7693	BNS 561 - **USPS Marketing Mail CR Flats is still showing DFSS**	**Corrected**
7834	**BNS 595 - Costs of Fragile is not being calculated properly**	**Corrected**
7835	**International Zone Chart displays an odd error**	**Corrected**
7836	**BNS 595 - EDDM at Retail Price is incorrect**	**Corrected**
7939	**BNS 530 - PMI not being returned for Canada**	**Corrected**
7946	**BNS 530 - Priority Mail heading is missing for some countries**	**Corrected**
8273	**BNS 595 - The Nonbarcoded Surcharge for USPS Marketing Mail Parcels is not correct**	**Corrected**
8277	**BNS 595 - All Prices for Parcel Select Lightweight Machinable Parcels are incorrect**	**Corrected**
8501	**International Dynamic Prefix Bar Code Assignment - Bhutan missing from ECOMPRO list**	**Corrected**

BUG 7693 - BNS 561 - USPS Marketing Mail CR Flats is still showing DFSS

Steps to Reproduce

Remove DFSS as a Destination Entry from:

- USPS Marketing Mail Flats
  - Carrier Route Flats
    - High Density Plus
    - High Density

Acceptance Criteria

The DFSS rates are no longer shown

BUG 7834 - BNS 595 - Costs of Fragile is not being calculated properly

Steps to Reproduce

1. Execute the domestic retail calculator, postcalc-sit2.usps.com
2. Choose "Check if the mail piece contains anything Fragile"
3. Choose weight as 1 ounce
4. Click Continue.
5. Expand First-Class and Other Options
6. Check the price for First-Class Mail Parcel

The price displayed is 12.62 = 2.67 + 9.95

Acceptance Criteria

The price should be 12.92 = 2.67 + 10.25

BUG 7835 - International Zone Chart displays an odd error

Steps to Reproduce

1. Open International Postal Zone Chart

2. Enter "345" in the text box
3. Click "Get Zone Chart"

The error displayed: Data is Null. This method or property cannot be called on Null values.

Acceptance Criteria
The error should be: The ZIP Code you have entered is invalid.

BUG 7836 - BNS 595 - EDDM at Retail Price is incorrect

Steps to Reproduce
1. Open the domestic business calculator
2. Choose Flat
3. Choose Every Door Direct Mail (EDDM)
4. Observe the price for Every Door Direct Mail (EDDM) at Retail.

The price displayed is 0.176

Acceptance Criteria
The price should be 0.177 for the Jan 2017 Price Change.

BUG 7939 - BNS 530 - PMI not being returned for Canada

Steps to Reproduce
Launch https://ircalc-cat4.usps.com/

1. Select Canada from the Country dropdown list
2. Enter Item's value - 200
3. Select Large Package - Enter 2 ounces for weight
4. Click "Continue"
5. Enter the From Zip Code - 20120
6. Enter the To Zip Code - E4H and click "Continue"
7. Under the Priority Mail Option please note that the PMI option is missing

Acceptance Criteria
PMI is returned for Canada

BUG 7946 - BNS 530 - Priority Mail heading is missing for some countries

Steps to Reproduce
Launch https://ircalc-cat4.usps.com

1. Select Belgium under the Country dropdown
2. Enter 200 for item value
3. Click on PMI Legal Flat Rate envelope under Select a Flat rate service
4. Notice that Priority Mail International Options heading is missing

5. Notice that under Expected Delivery Date - the following is not displayed correctly: 6 - 10 business days to many major markets1,2

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Missing some information on Mailing Service Summary page

Steps to recreate:

1. Select Country - Belgium
2. Item value - 200 dollars
3. Package - 2 ounces
4. Select Priority Mail International
5. Click on "Custom Forms and Extra Services"
6. Click "Continue"
7. Please note that under Expected Delivery Date to Belgium is 6 - 10 business days to many major markets1, 2 the below information is missing on the Mailing Service Summary page

1. Average performance to major markets.

2. Actual transit time may vary for origin and destination

Acceptance Criteria

Pages are update to match PROD

BNS 595 - The Nonbarcoded Surcharge for USPS Marketing Mail Parcels is not correct

Steps to Reproduce

1. dbcalc
2. USPS Marketing Mail Parcels
3. Preported Marking Parcels
4. Check for nonbarcoded parcels (a $0.061 surcharge will apply to SCF, NDC and Mixed NDC pieces). is incorrect

Acceptance Criteria

The cost should be $0.062

BNS 595 - All Prices for Parcel Select Lightweight Machinable Parcels are incorrect

Steps to Reproduce

1. dbcalc
2. Parcel Select Lightweight

3. Machinable Parcels
4. enter any weight
5. incorrect prices

Acceptance Criteria

The price will match the spreadsheet

BUG 8501 International Dynamic Prefix Bar Code Assignment - Bhutan missing from ECOMPRO list

Steps to Reproduce

Bhutan is returning a FALSE attribute for ECOMPRO.

1. Open the International Test Tool version 11.5
2. Click on GetServiceWithPricing tab
3. Enter the following: Caller ID - 4, Src ID - 4, Customer Type 004R4
4. Select Letter, Large Letter
5. Enter 20120 from Zip Code and 10039 as Country ID
6. Enter 2 ounces in weigth and click on Get
7. When the dats is returned expand the selection for PMI and look at one of the attributes.
8. ECOMPRO attribute shows as False.

Acceptance Criteria

ECOMPRO attribute should be displayed as True.